



AMTEC
Agricultural Machinery Testing and Evaluation Center
1977

ACR 027:2023 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR COFFEE GRINDER

■ Application for AMTEC Test

The test applicant shall submit AMTEC-OP-F01 (Agricultural Machinery Test Application Form) together with the following requirements:

- AMTEC-OP-F16 (Waiver for Machine Specifications)
- AMTEC-OP-F18 (Data Privacy Consent Form)

■ Technical Specifications of the Machine

The test applicant shall submit any document/s indicating the specifications of the machine upon application for testing. In case the said document/s are not available, the applicant shall fill out the Machine Specifications Sheet provided by AMTEC upon request.

- Operator's manual with complete specifications as indicated in Annex B of PNS/PAES 189:2018
- Brochure
- Machine specifications sheet (shall be filled out upon request and receipt of copy from AMTEC in case the manual or brochure is not available)

■ Preparation and Operation of the Machine

The coffee grinder shall be ready for testing. The officially designated operator of the test applicant shall operate, demonstrate, adjust, and repair. Meanwhile, the officially designated representative shall decide on matters related to the operation of the machine.

■ Running-in of the Machine

A test run shall be conducted prior the official test as to check its condition and make necessary adjustments to the machine.

■ Test Material

The test applicant shall prepare the roasted coffee beans which are sufficient for the three (3) test trials, sampling, and running-in. They should be:

- Commonly/locally grown coffee;
- Moisture content of 5-7% wet-based;
- 99% purity; and
- Enough quantity for an operation of a minimum of 15 minutes per trial.

■ Other Test Necessities

The following shall also be adequately supplied during the conduct of testing:

- Extension plugs for parts that need electricity in the grinder; and
- Containers made of corrosion resistant and food grade materials (eg. Stainless steel grade 304, 306) in compliance with food safety standards.

■ Machine Setting

The coffee grinder shall be tested at the manufacturer's recommended setting for the following:

- Input Capacity: _____
- Grinding mechanism rpm: _____



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■ Performance and/or Fabrication Test Requirements

AMTEC shall conduct various tests and verification on different performance parameters of the machine including the following requirements as per PNS/PAES 189:2018:

■ Fabrication Requirements

Criteria	Requirement as per PNS/PAES 188:2018
General Requirements	<input type="checkbox"/> Steel bars, metal sheet/plate, and mild steel shall be used for the manufacture of the different components. <input type="checkbox"/> Parts in direct contact with the beans (grinding mechanism, grinding chamber) shall be made of corrosion-resistant and food grade materials (e.g. stainless-steel grade 304, 316) in compliance to food safety standards. <input type="checkbox"/> It shall only use an electric motor as prime mover. <input type="checkbox"/> It shall have a mechanism for adjustment of the fineness of grinding of the coffee bean.
Frame and Stand	<input type="checkbox"/> Shall be able to support the whole coffee grinder assembly during operation.
Others	<input type="checkbox"/> There should be provision of magnets to prevent metallic materials in the grinding chamber. <input type="checkbox"/> Bolts and nuts, screws, bearings, bushing and seals shall conform to PAES requirements or other international standards. <input type="checkbox"/> Mechanism for immediate disengagement of power shall be provided. <input type="checkbox"/> All moving parts shall be provided with cover or guard.

■ Performance Requirements

Criteria	Requirement as per PNS/PAES 188:2018
Input capacity, kg/h	As per manufacturer's specifications
Output capacity, kg/h	As per manufacturer's specifications
Grinding recovery, %, minimum	96
Average particle size, maximum, mm	1.5

■ Safety, Workmanship and Finish

Criteria	Requirement as per PNS/PAES 188:2018
General	<input type="checkbox"/> Shall be free from any manufacturing defects that may be detrimental to its operation. <input type="checkbox"/> All metal surfaces shall be free from rust. <input type="checkbox"/> The external and internal part of the coffee grinder shall be free from sharp edges and rough surfaces. <input type="checkbox"/> Warning notices shall be provided in accordance with PAES 101:2000 – Agricultural Machinery – Technical Means for Ensuring Safety – General.
Base	<input type="checkbox"/> Shall be rigid and durable without any noticeable cracks and weak joints.
Rotating components	<input type="checkbox"/> Shall be statically and dynamically balanced.
Mechanism for immediate disengagement of power	<input type="checkbox"/> Shall be provided.
Moving parts	<input type="checkbox"/> Shall be provided with cover or guard.



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■ Suspension and Termination of Test

If the test material does not conform with the recommended quantity and characteristics, AMTEC shall not proceed with the test. Should the test applicant request the conduct of the test despite the non-conformity to the test requirements identified by AMTEC, the applicant shall sign the AMTEC Waiver for Nonconformity to Test Requirements.

AMTEC-OP-F24 (Waiver for Nonconformity to Test Requirements)

On the other hand, if the machine stops due to breakdown or malfunction during the test run affecting the machine's performance, the test may be suspended. If the machine cannot continue the operation, the test shall be consequently terminated.

■ Other Assistance During Test

1. For field and laboratory tests outside the AMTEC premises, the applicant shall shoulder the transportation expenses (i.e. fuel, toll fees, vehicle rental, plane fare, sea fare, etc.) of the AMTEC Staff assigned for the testing activity.
2. The applicant is requested to assist the AMTEC Staff in looking and/or making arrangements for hotel accommodation and food near the test site.
3. The applicant shall provide drinking water to the AMTEC Staff during the testing activity.
4. The applicant shall provide any form of shed or sunshade (e.g. tent, umbrella, etc.) for the test equipment, samples (if applicable) and AMTEC Staff during the testing activity in the field.
5. The applicant is requested to assist the AMTEC Staff in finding any means to access a safe and convenient restroom near the test site during the testing activity.

■ Testing Fee

1. The testing fee for coffee grinder is PhP 9,000.
2. To proceed through AMTEC test, the test applicant shall settle at least 50 % of the testing fee which is non-refundable but transferrable.
3. In cases of additional testing during the field, the test applicant shall immediately pass the required documents and settle at least 50% of the testing fee within 5 working days after the testing proper.
 Additional testing, number of machines: _____
4. Payment/s shall be directed to the following:
 Through UPLB Cashier's Office (8AM to 12PM): AMTEC Trust Fund Code No. 8271632-40A2040101000
 Through Landbank (8:30AM to 3PM): UPLB Trust Fund Account No. 1892100507 or UPLB FI Account No. 1892-1003-29

■ Other Reminders

1. All manufacturers, fabricators, assemblers, and importers (MFAI) shall secure a Certificate of Conformity (CC) from the Bureau of Agricultural and Fisheries Engineering (BAFE) which guarantees that their agricultural and fisheries machinery conforms with PNS/BAFS PABES or other relevant standards identified by BAFE. More information about the application for CC can be found at <http://bafe.da.gov.ph/index.php/certificate-of-conformity-of-manufacturers-fabricators-assemblers-distributors-dealers-importers-and-exporters/>.
2. All MFAI shall employ an Agricultural and Biosystems Engineer (ABE), as mandated by RA 10915 (ABE Law), who shall facilitate all activities and concerns pertinent to AMTEC testing and BAFE requirements. Do you currently have an ABE in your roster of employees? Yes No